

REMARKS/ARGUMENTS

This application has been carefully considered in light of the Non-Final Office action mailed January 25, 2006. In the action, the Examiner objected to the application because the elements identified by numbers 66 and 72 in the drawings were not described in the specification. However, these elements are described at page 8, line 25 and page 9, line 4. In view of the foregoing, reconsideration of this objection is requested.

An objection has also been made with respect to the Abstract. An amendment to the Abstract is submitted with this response.

Claims 1-14 have been objected to under 35 U.S.C. 112, second paragraph, as being indefinite. In this regard, the claims have been amended to overcome this rejection.

The Examiner has rejected claims 1-14 under 35 U.S.C. § 102(b) as being anticipated by Charpenet et al. (US 5,976,148). In light of this rejection, independent claims 1 and 14 have been amended to include a limitation regarding an elastically deformable ring that is moveable both radially outwardly by force and radially inwardly when the force is relieved. This

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elastically deformable ring element was disclosed by the application as filed, so these amendments do not constitute new matter. Since Charpenet does not recite this newly added claim limitation, withdrawal of this rejection is respectfully requested.

Charpenet discloses ancillary equipment for the implantation of artificial acetabular cup of hip prostheses. (See column 1, lines 9-11.) An acetabular cup 1 consists of a series of expandable petals 2 that are separated by slots 3. (See column 3, lines 26-28.) The petals 2 are equipped on their external surfaces with an assembly of barbs 5 forming points for osseous anchoring in the wall of an acetabular cavity 6 of an iliac bone 10. (See column 3, lines 28-33.) Further, the petals 2 present a relative elasticity which allows them to be compressed radially in a closed position. (See column 3, lines 53-57.)

The equipment for implanting this acetabular cup 1 includes an obturator cover 7 for holding the petals 2 of the acetabular cup 1 in a closed position, members 8 and 9 for holding the obturator cover 7 on the petals 2, and an ancillary impaction device 11 for impacting the acetabular cup 1 into the cavity 6. (See column 3, lines 39-44.) The equipment also includes a plate 12 which can be introduced into the acetabular cup 1 after

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extraction of the obturator cover 7 and a second ancillary device 13 which can cooperate with the plate 12 so as to affect the radial expansion of the petals 2 and consequently, their anchoring in the cavity 6 via barbs 5. (See column 44-50.)

To use the equipment disclosed in Charpenet, the acetabular cup 1 is initially capped by the obturator cover 7 so that the petals 2 are compressed radially via the plug 8 and the bushing 9. (See column 4, lines 57-59.) A surgeon then screws an end 22 of a shaft 24 into the plug 8 so as to unscrew the plug 8 from the bushing 9 and the obturator cover 7. (See column 4, line 62 through column 5, line 3.) As the plug 8 is removed from the obturator cover 7, the obturator cover 7 releases the petals 2 so that the radial elastic resiliency of the petals 2 forces the petals 2 radially outwardly to partially penetrate into the osseous wall. (See column 5, lines 3-7.) To assure the petals 2 are securely anchored into the osseous wall, the surgeon screws an ergonomic grip 41 until the grip 41 comes into abutment with a sleeve 43, which exerts an axial thrust to the plate 12 and causes the radial expansion of the petals 2 to drive the petals 2 further into the osseous wall. (See column 5, lines 47-59.) Once the anchoring of the acetabular cup 1 has been affected, the surgeon unscrews the grip 41 and pulls the plate 12 back with the

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aid of a gripping mechanism. (See column 5, lines 60-63.)

Like Charpenet, the present invention is also directed to an ancillary tool for positioning a prosthetic acetabulum of a hip prosthesis. (See page 1, lines 2-3.) The tool 1 for implanting an acetabulum 2 comprises a handle 4 having an endpiece 6 adapted to be removably connected to a distal end of the handle 4. (See page 6, lines 25-27.) The endpiece 6 includes a supple body 60 having an elastically deformable ring 66. In a preferred embodiment, the ring 66 includes petals 68, which are connected to a base 64 by elastically deformable connecting zones 70. (See page 8, line 23 through page 9, line 3.) In another embodiment, an endpiece 6' is designed for an acetabulum having an inner wall that is partly truncated, as shown in Figures 4 and 5. Like the preferred embodiment, the endpiece 6' comprises a supple body 60', a plurality of petals 68', and elastically deformable connecting zones 70.' (See page 11, line 16 through page 12, line 4.)

To use the ancillary tool of the present invention, a surgeon rotates a grip 46 in a first direction with respect to a rod 10 to affect a screw-nut system. (See page 9, lines 20-24.) In the manner of the screw-nut system, the grip 46 pushes a head

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34 inside the ring 66 to radially expand the ring 66 and push the outer surfaces 74 against an inner wall of the acetabulum. (See page 9, line 22 through page 10, line 2.) Once the acetabulum 2 is positioned in a patient's hip, the surgeon rotates the grip 46 in an opposite direction with respect to the rod 10 to disengage the head 34 from the endpiece 6. (See page 11, lines 1-3.) After the head 34 is removed from the endpiece 6, the elastic return deformation of the ring 66 causes the ring 66 to resume its initial configuration so that the endpiece 6 can be removed from the implanted acetabulum 2. (See page 11, lines 3-5.)

According to the Examiner, Charpenet anticipates claim 1 of the present invention because Charpenet discloses all of the elements set forth in claim 1. Specifically, the Examiner states that "a handle for manipulating a prosthetic acetabulum, including a distal end having a head for gripping the prosthetic acetabulum and a proximal end having a surface for application of a force of impaction" is shown as the ancillary impaction device 11 in Charpenet. The "at least one added endpiece adapted to be removably connected to the distal end of the handle" the assembly shown in Figure 4, namely the acetabular cup 1 and the obturator cup 7. Lastly, the Examiner states that the "supple ring radially deformable with respect to a longitudinal axis of the

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endpiece" is shown as the acetabular cup 1.

While the Applicant greatly appreciates the Examiner's detailed explanation of her basis for anticipation by the Charpenet patent in this case, the Charpenet patent does not disclose an "elastically deformable ring that is moveable both radially outwardly by force and radially inwardly when the force is relieved," as now required by newly amended claims 1 and 14. Not only does this new limitation reflect the structural distinctions between the present invention and the ancillary equipment disclosed in the Charpenet patent, but this limitation also embodies the major functional differences between the two inventions, as set forth below. Thus, since Charpenet does not recite all of the claim limitations of the newly amended claims, withdrawal of the rejection based thereon is respectfully submitted.

Charpenet does not recite all of the elements of amended claim 1 because Charpenet does not teach an elastically deformable ring that is moveable both radially outwardly by force to expand an acetabulum and radially inwardly when the force is relieved to release the acetabulum. As stated above, the Examiner concluded that the supple ring of the present invention

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is represented by the acetabular cup 1 of Charpenet. At first blush, this conclusion is troubling because the acetabular cup 1 of Charpenet is actually implanted into a patient's hip, like the acetabulum 2 of the present invention, and therefore cannot be considered an element of an ancillary tool for positioning a prosthetic acetabulum, such as the ancillary tool to which claim 1 is directed.

However, even setting this argument aside and assuming arguendo that the supple ring of the present invention can be represented by the acetabular cup 1 of the Charpenet patent, the Charpenet patent still does not teach an "elastically deformable ring that is moveable both radially outwardly by force and radially inwardly when the force is relieved" because the acetabular cup 1 of the Charpenet patent is intended to remain in a patient's hip. While the acetabular cup 1 does include "means of radial elastic resiliency," there is no teaching in Charpenet that the petals 2 of the acetabular cup 1 are elastically moveable "radially inwardly," as required by at least claim 1. In fact, such an assertion, namely that the petals 2 of the Charpenet patent are elastically moveable "radially inwardly," would be contrary to the very premise of the Charpenet.

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As set forth above, the acetabular cup 1 of the Charpenet patent is intended to remain in a patient's hip to function as a prosthetic acetabulum. Thus, the petals 2 of the acetabular cup 1 are moveable radially outwardly so as to secure the cup 1 into the osseous wall. However, the petals 2 do not move "radially inwardly" after an application force is relieved. If the petals 2 were able to move "radially inwardly" after an application force was relieved, then the acetabular cup 1 would pull away from the osseous wall and the prosthetic acetabulum would no longer be secured.

In contrast, the elastically deformable ring 66 of the present invention is not intended to remain in a patient's hip, but rather to serve part of a tool for seating an prosthetic acetabulum 2, as explained above. Specifically, the ring 66 is radially outwardly expanded by force so that an outer surface of the ring 66 engages an inner surface of the acetabulum. This allows a surgeon to use the tool 1 to manipulate and seat the acetabulum 2. Further, after the acetabulum 2 has been properly positioned in a patient's hip, the force is relieved and elastically deformable ring 66 moves radially inwardly so that the outer surface of the ring 66 no longer contacts the inner surface of the acetabulum 2. As a result, the surgeon can remove

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the tool 1 from the patient without disturbing the implanted acetabulum 2.

Therefore, since the acetabular cup 1 disclosed in the Charpenet patent is not elastically moveable "radially inwardly," as required by the claims of the present invention, withdrawal of this rejection is respectfully submitted.

In view of the foregoing, reconsideration of the claims of this application is respectfully requested and favorable consideration and allowance of the claims solicited. Should the Examiner have any questions regarding this response, the amendments submitted herewith, or the allowability of the claims, it would be appreciated if the Examiner would contact the undersigned attorney of record at the telephone number provided below for purposes of facilitating prosecution of this application and for scheduling an interview, if necessary.

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Respectfully submitted,

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